

IN THE SPECIFICATION

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

Please amend the claims as follows:

30. (previously presented) A method, comprising:
storing a first frame in a buffer that delays transmission of the first frame on a shared downlink channel, wherein the first frame comprises data information;
transmitting a second frame on a dedicated downlink channel, said second frame comprising at least one slot comprising control information associated with the first frame for recovering said first frame; and
then transmitting said first frame on the shared downlink channel such that transmission of said first frame is delayed with respect to transmission of the second frame.

31. (previously presented) The method of claim 30, further comprising:
receiving said second frame over said dedicated channel;
receiving said first frame over said shared channel, wherein the second frame is received before receiving said first frame over said shared channel; and
recovering said first frame using said control information.

32. (previously presented) The method of claim 30, wherein said control information comprises an indicator comprising spreading factor information for recovering said first frame, and wherein transmission of said first frame is delayed with respect to transmission of the second frame by a duration that allows the spreading factor information to be extracted from the

indicator before reception of said first frame.

33. (previously presented) The method of claim 32, when said first frame is received despreading immediately begins and Walsh deconvolving immediately begins using the spreading factor information received before receipt of the first frame.

34. (previously presented) The method of claim 30, wherein said slot further comprises voice information, power control information, and pilot information.

35. (previously presented) The method of claim 30, wherein the first frame is delayed with respect to the second frame such that an end of the second frame is non-overlapping with a beginning of the first frame such that the beginning of the first frame is received after the end of the second frame.

36. (previously presented) The method of claim 30 wherein the control information of the second frame corresponds to the data information in the first frame, and wherein the delay between the second frame and the first frame corresponds to a plurality of slot durations.

37. (previously presented) A system, comprising:
a base station comprising:
a buffer for storing a first frame to delay transmission of the first frame on a shared downlink channel, wherein the first frame comprises data information; and
a transmitter for transmitting a second frame on a dedicated downlink channel, said second frame comprising at least one slot comprising control information associated with the first frame for recovering said first frame, and then transmitting said first frame on the shared downlink channel such that transmission of said first frame is delayed with respect to transmission of the second frame.

38. (previously presented) The system of claim 37, further comprising:
a receiver for receiving said second frame over said dedicated channel, and for receiving

said first frame over said shared channel, wherein transmission of said first frame is delayed with respect to transmission of the second frame by a duration that allows the second frame to be received before receiving said first frame over said shared channel, wherein the receiver comprises:

means for recovering said first frame using said control information.

39. (previously presented) The system of claim 37, wherein said control information comprises an indicator comprising spreading factor information for recovering said first frame, and

wherein the receiver further comprises:

a filter that extracts the spreading factor information from the indicator before reception of said first frame.

40. (currently amended) The system of claim 39, wherein the receiver further comprises:
a despreader that directly receives the first frame from the filter, wherein the despreader can immediately begin despreading when said first frame is received; and
a Walsh decoder, coupled to the despreader, that receives the spreading factor information from the filter before receipt of the first frame.

41. (previously presented) The system of claim 37, wherein said slot further comprises voice information, power control information, and pilot information.

42. (previously presented) The system of claim 37, wherein the first frame is delayed with respect to the second frame such that an end of the second frame is non-overlapping with a beginning of the first frame such that the beginning of the first frame is received after the end of the second frame.

43. (previously presented) The system of claim 37, wherein the control information of the second frame corresponds to the data information in the first frame, and wherein the delay between the second frame and the first frame corresponds to a plurality of slot durations.

44. (previously presented) A base station, comprising:
a buffer for storing a first frame to delay transmission of the first frame on a shared downlink channel, wherein the first frame comprises data information; and
a transmitter for transmitting a second frame on a dedicated downlink channel, said second frame comprising at least one slot comprising control information associated with the first frame for recovering said first frame, and then transmitting said first frame on the shared downlink channel such that transmission of said first frame is delayed with respect to transmission of the second frame.

45. (currently amended) The ~~system~~ base station of claim 44, wherein said slot further comprises voice information, power control information, and pilot information.

46. (currently amended) The ~~system~~ base station of claim 44, wherein the first frame is delayed with respect to the second frame such that an end of the second frame is non-overlapping with a beginning of the first frame such that the beginning of the first frame is received after the end of the second frame.

47. (currently amended) The ~~system~~ base station of claim 44, wherein the control information of the second frame corresponds to the data information in the first frame, and wherein the delay between the second frame and the first frame corresponds to a plurality of slot durations.

48. (currently amended) The ~~system~~ base station of claim 44, wherein the data information, and symbol-level control information comprises symbol-level data information, and further comprising:

a multiple access control unit that receives a communication signal comprising data information from the shared channel and control information from the dedicated channel;

wherein the buffer stores the symbol level data information thereby creating a delay between the symbol-level data information and the symbol-level control information;

an encoder, coupled to the buffer, that generates first code symbols based on the symbol-level control information, and then after the delay generates second code symbols based on the symbol-level data information that corresponds to the control information, wherein the delay corresponds to the time required to recover spreading factor information;

an interleaver, coupled to the encoder, that generates first and second interleaved code symbols based on the first code symbols and the second code symbols, respectively;

a scrambler, coupled to the interleaver, that scrambles the first and second interleaved code symbols and generates first and second scrambled code symbols, respectively;

a Walsh coverer, coupled to the scrambler, that receives the spreading factor information and the first and second scrambled code symbols, and uses the spreading factor information to select an appropriate Walsh function to Walsh cover the first scrambled code symbols and generate spread data information; and

a PN spreader, coupled between the Walsh cover and the transmitter, that further spreads the spread data information and generates the first data frame.

49. (previously presented) A mobile station, comprising:

an input for receiving a first frame over a shared channel and a second frame over a dedicated channel, wherein the first frame comprises data information, and said second frame comprises at least one slot comprising control information associated with the first frame for recovering said first frame, wherein said first frame is delayed with respect to the second frame such that the second frame is received before receiving said first frame over said shared channel; and

means for recovering said first frame using said control information.

50. (currently amended) The ~~system~~ mobile station of claim 49, wherein said control information comprises an indicator comprising spreading factor information for recovering said first frame, and

wherein the mobile station further comprises:

a filter, coupled to the input, that extracts the spreading factor information from the indicator before reception of said first frame.

51. (currently amended) The ~~system~~ mobile station of claim 50, ~~wherein the receiver~~ further comprises:

a despreader that directly receives the first frame from the filter, wherein the despreader immediately begins despreading when said first frame is received to generate data chips; and

a Walsh decoder, coupled to the despreader, that receives the spreading factor information from the filter before receipt of the first frame and determines an inverse function to decode the data chips, and generates despread data symbols.

52. (currently amended) The ~~system~~ mobile station of claim 49, wherein said slot further comprises voice information, power control information, and pilot information.

53. (previously presented) The system of claim 49, wherein the first frame is delayed with respect to the second frame such that an end of the second frame is non-overlapping with a beginning of the first frame such that the beginning of the first frame is received after the end of the second frame.

54. (currently amended) The ~~system~~ mobile station of claim 49, wherein the control information of the second frame corresponds to the data information in the first frame, and wherein the delay between the second frame and the first frame corresponds to a plurality of slot durations.

55. (currently amended) The ~~system~~ mobile station of claim ~~50-51~~, ~~wherein the receiver~~ further comprises:

a descrambler that receives the despread data symbols from the Walsh decoder, and descrambles the despread data symbols to generate descrambled symbols;

a deinterleaver that receives the descrambled symbols from the descrambler, and generates code symbols; and

a Viterbi decoder that receives said code symbols and generates the original code symbol sequence corresponding to the first frame and the second frame.